

User Manual

Screw Air Compressor **L02 – L03 – L04 – L05**

Translation of the original instructions



Version 03 - June 2011

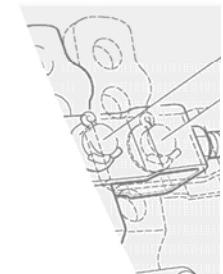


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1 GRAPHICS AND WARNING SYMBOLS

An adhesive label, visibly placed on the cover of the compressor, reports a series of symbols (pictograms) to inform anyone about risks and residual dangers contained in the compressor itself.

Description of pictograms following to norms: EN 1012-1 / ISO 7000 / CE 245/24



READ OPERATOR'S INSTRUCTIONS BEFORE STARTING THE COMPRESSOR



DANGER: MAINTENANCE WORK (CONSULT INSTRUCTION MANUAL)



WARNING: RISK OF ELECTRIC SHOCK



FORBIDDEN TO REMOVE PROTECTIVE COVERING AND SAFETY DEVICES



WARNING: HOT SURFACE



DANGER: LOW TEMPERATURE - FOLLOW INSTRUCTION MANUAL



DANGER: COMPONENTS + EQUIPMENT UNDER HIGH PRESSURE



DANGER: AUTOMATIC MODE. START-UP WITHOUT WARNING



DANGER: HOT OR NOXIOUS GASES OUTLET: UNBREATHABLE



ON: START- UP SWITCH



OFF: STOP SWITCH

2 GENERAL INFORMATION

This manual is aimed for the compressor user, and specifically for :

- Handling and lifting personnel.
- Installation personnel.
- Electrical installation technicians.
- Operation and surveillance personnel.
- Maintenance staff.
- Specialised service and repair technicians.

This instruction manual should be considered as ' part ' of the compressor itself. It should be kept as a reference for the entire life of the unit until its disposal, or handed over in the event of sale. The manual is usually supplied inside a plastic envelope attached to the outside of the compressor; it should always be kept properly and be available for consultation near the unit itself. If lost or damaged, a new copy may be obtained from the manufacturer, specifying the details on the compressor information plate.

The manual exclusively concerns the compressor itself, and does not concern any other components or accessories in an installation, for which reference must be made to the appropriate manuals.

The manual is based on the state of the technology at the moment of sale of the compressor. The manufacturer retains the right to review it following new developments at any time without any duty to update previous manuals. Any suggestions for improvements or modifications to the manual may be made directly to manufacturer.

The identification data for the compressor is shown on the first page of this manual, and is identical to those shown on the **COMPRESSOR IDENTIFICATION PLATE**, as in compliance with **EEC** directive on the issue. Other data concerning noise level and weight is shown in the technical specifications table **TECHNICAL CHARACTERISTICS**.

In this manual, the model of the compressor is identified by its code and by the motor power expressed in kW, as indicated in the page **TECHNICAL CHARACTERISTICS**.

3 CORRECT COMPRESSOR OPERATING CONDITIONS

The compressor described in this manual is only suitable for the compression of air at the atmospheric pressure, and may deliver air up to the maximum pressure stated on the identification plate: MAX PRESS - bar

The compressor is a 'industrial' type, to be used in accordance with the technical specifications of the compressor itself.

The compressor works automatically, and no specific operator is required. The unit must however be supervised in use and must have a routine maintenance by an expert technician, who should be familiar with all the aspects of its operation and safety outlined in this manual.

The compressor is designed exclusively for operation connected to an approved air reservoir of suitable capacity (at least 200 lt.) and having pressure rating of at least 10% higher than the unit itself.

The air delivered from the compressor is not sufficiently treated for human use. It may never be used as breathing air.

The compressor is designed only to be operated complete with closed enclosure, for the purposes of cooling, protection and sound proofing.

NOTE: The instruction concerning safety are marked with this simbol



4 IMPROPER USE OF COMPRESSOR

The manufacturer shall waive all responsibility in case of:

- a Incorrect use by untrained or negligent personnel.
- b Use in violation of current laws.
- c Incorrect installation.
- d Installation without suitable reservoir.
- e Installation in dust-filled environments (i.e. cement, silica etc.....).
- f Incorrect electrical connection.
- g Serious lack of proper maintenance.
- h Use of non-original spares for the model.
- i Total or partial failure to observe the instructions.
- j Damage due to natural or exceptional events.
- k Tampering with the safety valve.
- l Exceeding maximum pressure rating through tampering.
- m Operation of compressor without panels and guards.

5 SAFETY MEASURES

Read carefully to avoid potential risks.

DANGER

MEASURES

Handling.....	Base designed for use with forklift and transpallet forklift.
Electrical Connection.....	Built-in full load AC23-filled circuit-breaker. (*)
Electrical Board.....	Bolted on, with door interlock switch. (*)
Emergency.....	Built- in yellow/red warning light. (*)
Short Circuit.....	Built-in line fuses. (*)
Motor Overload	Magneto-thermal cut-out. (*)
Electrostatic Discharge	De-oiling filter with electrical continuity.
Compressor Overheat	110 °C thermostat with cut-out. (*)
Insufficient Lubrication	110 °C thermostat for 'adiabatic' compression.
Starting Under Load.....	10 sec. delay from energizing (*)
Overpressure	Approved safety valve.
Back-Pressure	Non-return valve
Residual Pressure	Descharge tap and internal air gauge.
Phase Reversal (wrong direction of rotation)	Indicator arrow or R.S.F. electronic relay (*)
Temperature	
Max. Environment > 45° C	110 °C thermostat.
Min Environment < 2° C.....	See starting recommendations.
Pressure Parts	Built to EEC 87/404 standards.
Flexible Hoses	High pressure hose used (4-6 times working pressure).
Hot Surfaces	Parts reaching 70 °C + marked with warnings

(*) NOTE : only for version with "AIRBASIC 2" controller

6 TECHNICAL CHARACTERISTICS

6.1 REFERENCE

GAS COMPRESSED	TYPE	AIR
INLET PRESSURE	BAR (A)	1 (ATMOSPHERIC)
INSTALLATION ROOM	TYPE	INDOOR
ROOM TEMPERATURE - MAX/MIN	° C	MÁX. +40 / MIN. +2
WORKING TEMPERATURE	° C	50-65 + ROOM TEMP
AIR OUTLET-TEMPERATURE	° C	40-50 + ROOM TEMP
RESIDUAL OIL CONTENT	PPM	2 - 3
MAX ROOM HUMIDITY	%	80
MAX ALTITUDE	m	1000
MAX STARTING/Hour	N°	6
ELECTRICAL SUPPLY	Volt / Hz / A	SEE DATA PLATE
RATING	HOURS	24 / 24

6.2 PERFORMANCE

COMPRESSOR TYPE	MOTOR POWER		FREE AIR DELIVERY *		MAXIMUM PRESSURE	NOISE**	
	L	kW	HP	m ³ / min	m ³ / h		
02 SINGLEPHASE		2,2	3	0,205	12,3	10	60
02		2,2	3	0,24	14,4	10	61
03		3	4	0,36	21,6	10	61
04		4	5,5	0,53	31,8	10	62
05		5,5	7,5	0,67	40,2	10	66

* Capacity and power measurements according to ISO 1217, ed.3, ANNEX C – 1996 test code / Pneurop/Cagi PN 2 CPTC2

** Noise values determined according to ISO 2151 and ISO 3744.

7 ELECTRIC MOTORS - Technical Features

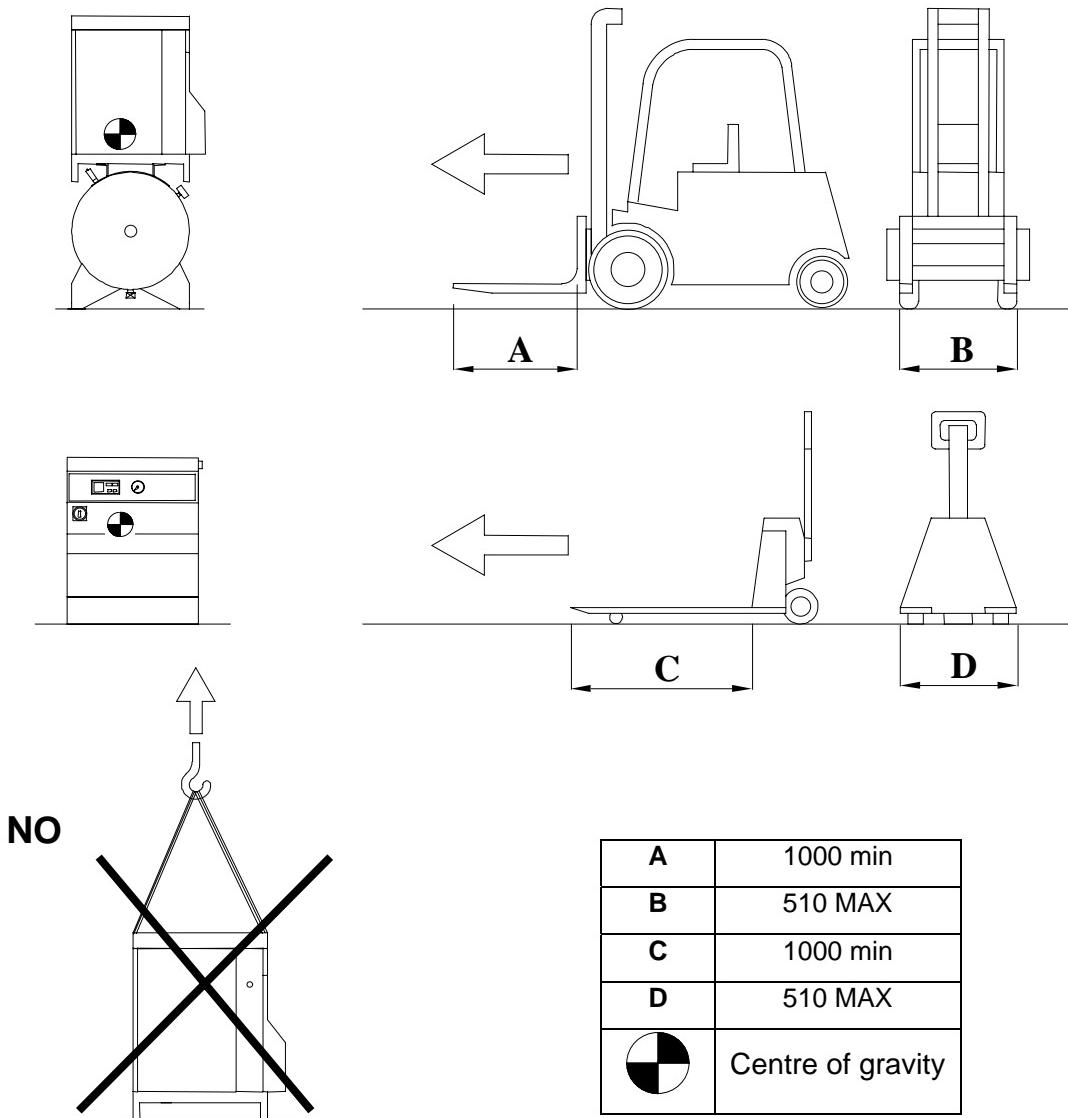
- Construction	- IP 55	- Class F.	V	V
- Universal Voltage according to DIN-IEC 38 Norms			400/690	230/400
- Voltage tolerance of connection $\pm 5\%$			400	230
- Network voltages admissible with nominal power				
- at 50Hz			380/420	220/240
- Nominal current indicated on the data plate referred to			400	230

REMARK

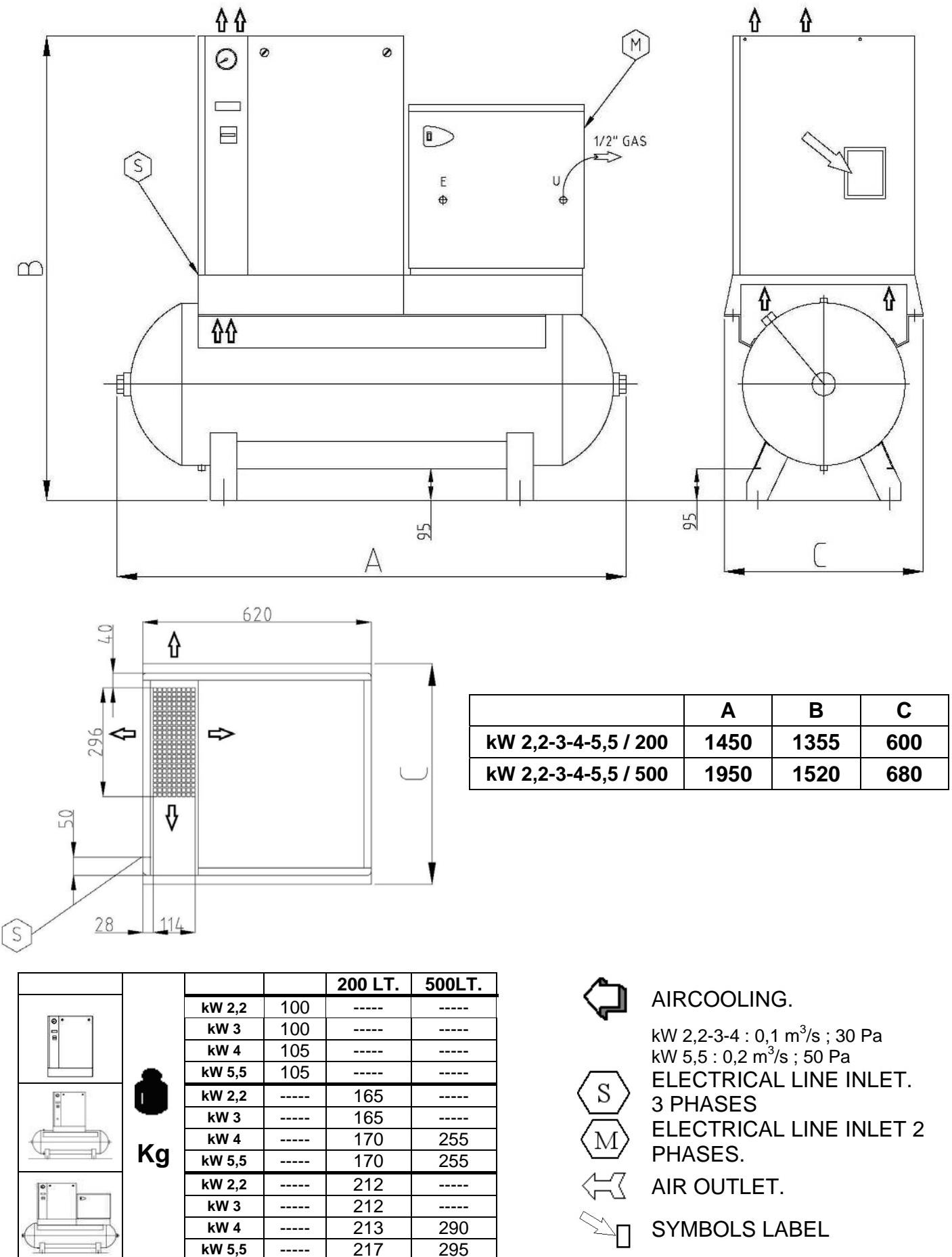
1. The control of the electrical input is to be carried out only by skilled staff.
2. The value of current absorbed by the motor is meant measured on the cables of the motor after the start up breakers, the transformer and the fans, in case there are any.



8 LIFTING-TRANSPORTATION

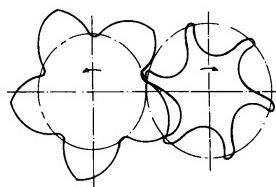


9 DIMENSIONS - WEIGHTS



10 OPERATING PRINCIPLES

The air end is a single-stage asymmetrical screw type, driven by an electric motor. The air is compressed through the rotation of a male and female rotors which mate perfectly along their parallel axes, and are housed in a cast-iron case.



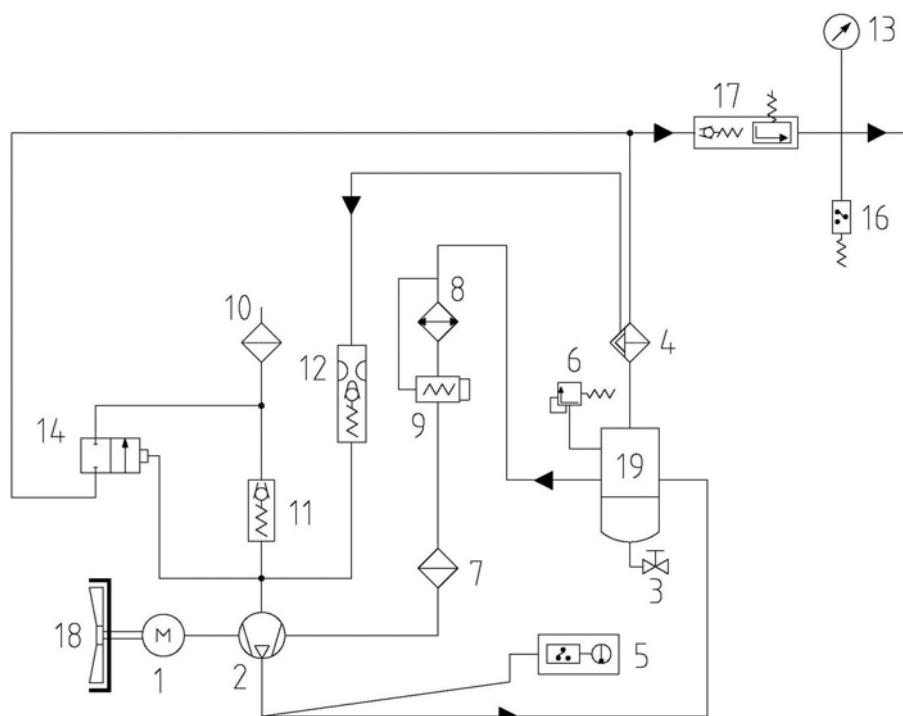
Oil is injected into the air-end housing for the double purpose of cooling the unit as well as lubricating the parts in movement.

The air, once compressed, enters a receiver where the remaining oil is separated to a residual of about 2-3ppm. At this point it is ready to be delivered.

Should the oil temperature be above the desired running temperature, the separated oil will pass through a thermostat-controlled oil cooler, should not this be the case, it will be bypassed directly into the air end to start a new cycle of lubrication and cooling.

The air for the cooler used to cool the motor, it is led into the compressor case through a fan driven directly by the motor.

11 COMPRESSOR DIAGRAM



P.	KEY	P.	KEY
1)	ELECTRIC MOTOR	11)	AIR INTAKE VALVE
2)	AIR-END	12)	OIL RETURN
3)	DISCHARGE OIL	13)	PRESSURE GAUGE
4)	OIL SEPARATION FILTER	14)	DISCHARGE VALVE
5)	TEMPERATURE CONTROL DEVICE	15)	
6)	SAFETY VALVE	16)	PRESSURE SWITCH/ PRESSURE TRANSDUCER
7)	OIL FILTER	17)	MINIMUM PRESSURE NON RETURN VAL
8)	OIL RADIATOR	18)	COOLING FAN
9)	THERMOSTAT VALVE	19)	OIL TANK
10)	AIR INTAKE FILTER		

12 REGULATION SYSTEM (only for version with AIRBASIC 2 controller)

The compressor is specifically designed to operate automatically according to the control algorithm implemented into the AIR BASIC 2 controller.

When the button ON is pushed, the compressor starts off in sequence with the "Wye-Delta" function.

Once the "Why-Delta" transition has been completed, the timer counts a 1 second delay at the end of which the electric valve is activated and the compressor passes to the load phase.

The pressure is measured by a pressure transducer linked to the controller.

When the pressure reaches the Pmax operation value the controller deactivates the electric valve, leaving the compressor in unload phase at most for three minutes.

If during the unload phase the pressure decreases at the Pmin value of the pressure switch, the controller sends the input to restart the compressor.

If the pressure remains at a higher value than the Pmin, the motor is switched off after the unload phase. As soon as the pressure decrease below the Pmin value, the motor is started to load phase.



13 WORKING PRESSURE SETTING

VERSIONS WITH OVERLOAD CUT-OUT :

The pressure switch controls the load/unload operation of the compressor.

The set-up of the pressure switch is done by CompAir.

If it is necessary to modify the pressure switch setting, contact CompAir authorized distributor.

It's prohibited setting the pressure switch at pressure over 10 bar.

ONLY FOR VERSIONS WITH AIRBASIC 2 CONTROLLER :

The controller controls the load/unload operation of the compressor, measuring the pressure at output and comparing it with Pmax and Pmin value set.

The set-up of the compressor is done by CompAir.

If it is necessary to modify the set value of Pmin and Pmax, contact CompAir authorized distributor.

It's prohibited setting the pressure switch at pressure over 10 bar.

14 AIR CONNECTION

IMPORTANT: CONNECTION PIPING

Use a flexible hose to connect the compressor to the network (not included in the delivery).

15 INSTALLATION

15.1 INSTALLING LOCATION

- a The compressor must be installed on an even surface, bearing in mind the compressor's weight (Cf. Technical specifications).



The water drain contains traces of oil.

- b Study the dimensional drawing for the required minimum distances to walls and other machines.

- c Make sure that the compressor room is properly ventilated. The cooling air temperature must be lower than + 45°C or higher than 0°C. Prevent recirculation of cooling air. If the compressor is provided with air ducts, observe the required air volume and the max. pressure loss of the ducting. Observe also the possibility to clean the cooler (Cf. Technical specifications).



Please note that in case of an air-cooled compressor, almost the whole compressor input power is transferred to the cooling air as heat.

The compressor should not be installed in location with concrete, silica or other dust in the atmosphere without special intake pre-filtering: IN CASE OF DOUBTS PLEASE CONTACT COMPART AUTHORIZED DISTRIBUTOR.

Outside installation is not allowed:



15.2 INITIAL CHECKS

After removing the compressor from its packaging, before proceeding with installation, please verify that no damages occurred during transportation.

Packaging materials such as wood, nails and plastic sheet could be dangerous for children and should not be left within their reach.

- a - Check that all the fuses in the electrical board are properly fitted and tightened.
- b - Check that the protection main nuts are tightened and the screw fixed.

15.3 ELECTRICAL CONNECTIONS

The electric connections must be made according to the EC standards. All local safety regulations must also be observed.

Make sure that the operating voltage is correct. The voltage must be as rated, $\pm 5\%$. Check that each phase has an equal voltage.

The customer must provide supply cable short circuit protection. The fuse type refers to the electric diagrams and technical data.

If the compressor is equipped with an integrated dryer, a separate 230V supply must be connected to the el.box (Cf. electric diagrams and technical data).

Connecting the protective earth lead correctly is highly important.

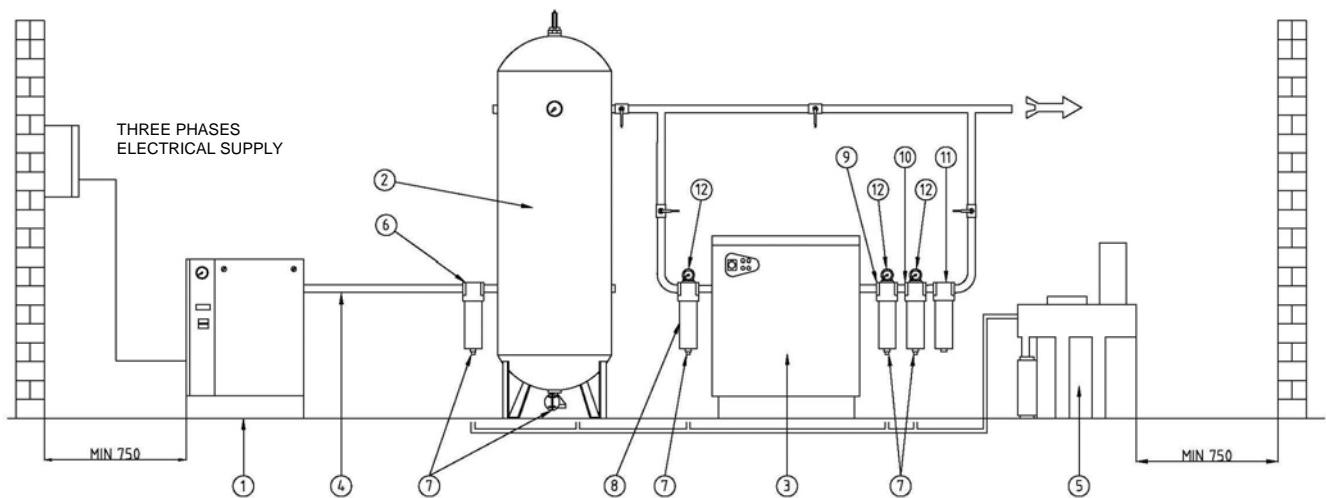


Power supply connections are only allowed to qualified electricians. No computers should be installed near the compressor. Make sure that any computers is connected to an electrical circuit separate from that of the compressor.

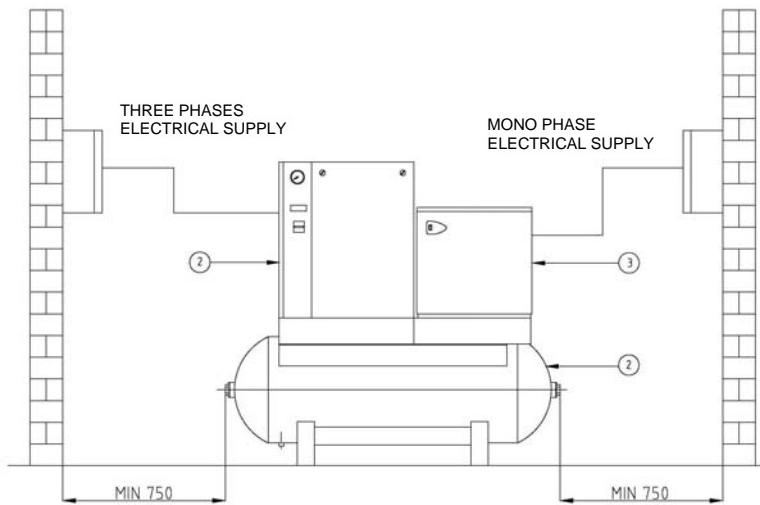
15.4 RECOMMENDATIONS.

- a** The air drawn into the compressor must be completely free from toxic fumes and inflammable vapours from solvents, paints etc, which would cause fire or explosions and pollute the working area.
- b** The usage of the compressor without a proper air reservoir will jeopardise its functionality. Overloading the electrical control system, may cause too many starts per hour, lead to motor damage and shorten the life of the unit.
- c** Never dismantle or modify guards and isolating materials fitted to the compressor.
- d** Never tamper with the pressure regulator and/or pressure switch, or set working pressure higher than that the one set for the compressor model and for the reservoir. Maximum available pressure must always be below the blow-off pressure level for the safety valve fitted to reservoirs, built to current safety standards.

16 INSTALLATION DIAGRAM



RIF.	DESCRIPTION
1	COMPRESSOR
2	TANK
3	AIR DRYER
4	FLEXIBLE HOSE
5	OIL-WATER SEPARATOR
6	CENTRIFUGAL SEPARATOR
7	AUT. COND. DISCHARGE
8	CERAMIC FILTER
9	COALESCING FILTER 0,1m
10	COALESCING FILTER 0,01m
11	ACTIVE CARBON FILTER
12	DIFFERENTIAL MANOMETER
	AIR EXIT



NOTE : MIN. DISTANCE TO REAR WALL = 1000 MM

17 FIRST START UP OPERATION

Recommendations:

- a Before starting the compressor for the first time, make sure that:
 - the flexible hoses are in good condition and efficient and do not show any signs of abrasion or cracks
 - the electrical power phases are connected properly. A phase reversal protection does not allow the compressor to start and prevents damages to the air end.
 - **The compressor must not be operated on with the door open**
 - all protections are in place and fixed properly
 - all the electrical wiring is in good conditions, and that the earth is properly connected
 - there are no oil or air leaks
- b Before opening the valve and letting the air into the connecting hose, make sure that its end is fixed. This is to prevent whip-lashing of the hose that could cause injuries.
- c At the end of each working session, switch the power off using the off button on the controller.
- d **The air generated contains oil vapour and cannot be breathed; therefore the compressor should be placed in a separate room.**



18 FIRST START (NOT VALID FOR VERSION WITH “AIRBASIC 2” CONTROLLER)

For starting the compressor push “ON-1” button (BLACK color), positioned on the frontal panel.

The compressor is automatically regulated by a pressure switch that cuts off the power to the motor when air pressure in the tank reaches MAXIMUM, and starts it up again when the pressure drops to MINIMUM.

For switch off the compressor push “OFF-0” button (RED color), positioned on the frontal panel.

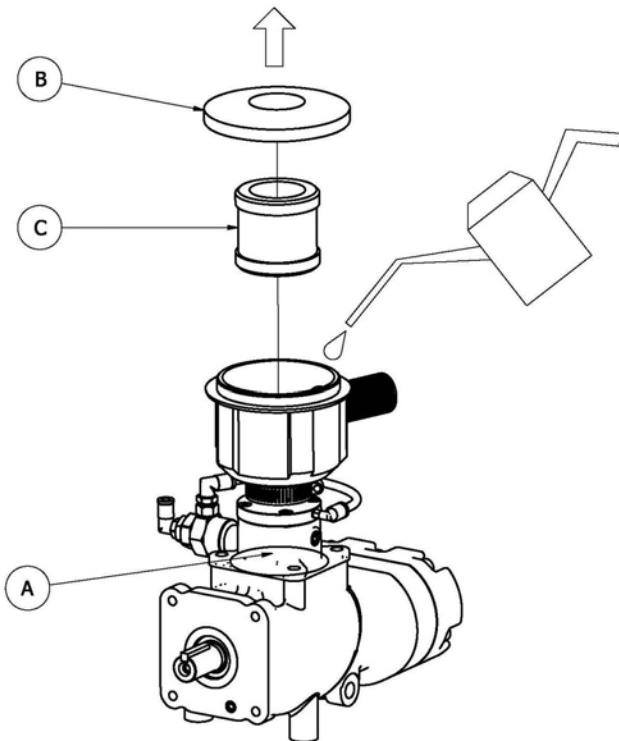
The pressure range is fixed to MIN 8 bar / MAX 10bar

NOTE : The compressor should work at least 3 minutes before switching it off. Shorter working periods can damage the compressor in long term and are not recommended,

19 START UP AFTER LONG STORAGE PERIODS

IF THE COMPRESSOR REMAIN SWITCHED OFF FOR MORE THEN TWO MONTHS, PLEASE PROCEED AS FOLLOWS :

- a reach the intake valve (A) by: detaching cover (B) and removing the air intake filter cartridge (C)
- b put in 100 cc of proper oil
- c run compressor for ten seconds
- d repeat stage b an other time
- e replace the parts, and start unit.



20 STARTING AT LOW TEMPERATURES

Warning: if the room temperature may fall below 0°C it is **essential** to protect all pipe/hosework and condensate drains with suitable insulation. This will prevent blockage due to ice, which can cause dangerous damages to the air reservoir.

If the room temperature remains constant around 0°C it is recommended to use a synthetic oil as the one indicated on the table.

Recommended procedure for start-up with cold temperature (below 0 °C):

- a Start the motor up for 5 seconds then switch off before the pressure rises.
- b Repeat phase a.
- c Temporarily start the compressor, checking that the pressure rises to a value close to the maximum working pressure
for example: 9 BAR for 10 BAR working pressure models
- d Switch off the compressor immediately when pressure at phase c is reached.
- e Repeat phases c - d.
- f Finally, start the compressor, making sure that the pressure is not exceeded due to the formation of ice in the hoses and/or icing up of the retaining valve.



21 SHUT-DOWN DUE TO POWER FAILURE

- a Turn off the power from the main switch and make sure that the compressor cannot be accidentally started.
- b The blow down function empties the receiver after stopping; wait 2 minutes.
- c Turn the power on from the main switch and start up the compressor.

VERSIONS WITH OVERLOAD CUT-OUT :

If a cut-out occurs, the compressor will stop. Once the power is back again, the compressor will resume operation automatically, with no delay.

N.B.: For safety reasons, it is absolutely recommended to affix a sign near the machine to alert people that the compressor may come back into operation automatically, and without prior notice. It is also mandatory to check that the automatic re-start of the compressor will not pose any hazards whatsoever.

ONLY FOR VERSIONS WITH AIRBASIC 2 CONTROLLER :

In the event of transient power failure, the compressor will shut-down and re-start in automatic after 10 sec (the set time to unload the oil separation tank to guarantee a correct restart).

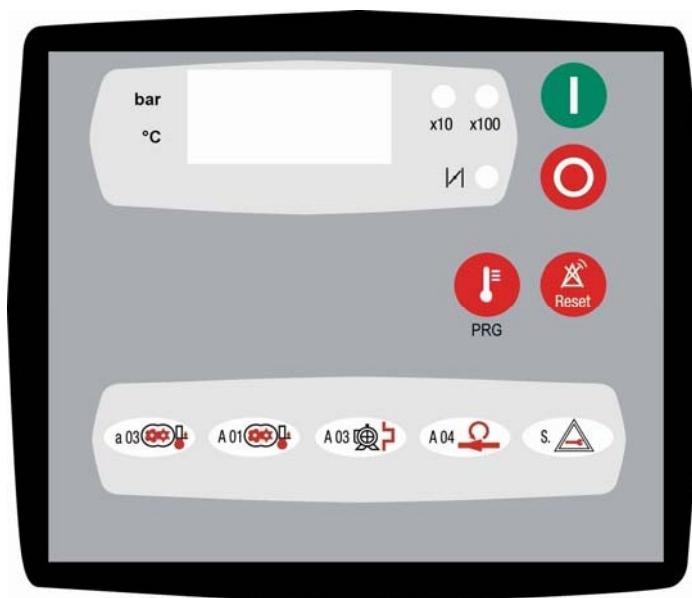
WARNING: Take extra care when in this situation in order to avoid any damage to persons or property caused by the drop in air pressure in the distribution installation.

22 ELECTRONIC CONTROLLER (FOR SPECIFIC VERSION)

All compressor settings are made by using the electronic controller AIRBASIC 2. For detailed instructions for the controller, please refer to the AIRBASIC 2 Controller User's Manual.

Controller regulates the output of the compressor. The following variables have been set in to the controller:

- target, unload and load pressures
- service intervals
- programmable I/O
- operational parameters
- alarm and shutdown limits



23 MAINTENANCE



Only authorized CompAir personnel is to carry out maintenance operations that are not included in this manual.



Always wear protective clothes and gloves during the maintenance.

23.1 BEFORE MAINTENANCE



Caution: Hot surfaces inside the compressor cabinet immediately after stopping.

- a** Stop the compressor.
- b** Turn the power off from the main switch and make sure that the compressor cannot be accidentally started.
- c** The blow down function empties the receiver after stopping; wait 20 seconds.

23.2 AFTER MAINTENANCE

- a** Turn the power on from the main switch.
- b** Start up the compressor.

24 MAINTENANCE PROGRAM



- Maintenance and service operations other than those described in item n. 4÷8 must carried out by service personnel authorized by CompAir.
- Always fill in the log.

Operation	1	2	3	4	5	6	7	8
Check fault indicator lights and alarms (only for "AIRBASIC" controller)	*							
Discharge air tank drain		*						
Check operation of condensate removal drain and clean strainer	*							
Check oil level **		*						
Change oil, see "Oil recommendations"				*	*			
Replace oil filter				*	*			
Replace oil separator cartridges				*	*			
Replace air filter				*	*			
Clean cooler externally					*			
Check operation of pressure relief valve					*			
Replace seal kits of inlet valve						*		
Check oil leaks			*					
Replace oil hoses						*		
Clean inside compressor			*					
Clean oil return line				*				
Replace shaft seal kit							*	
Clean air filter			*					
Check and retighten main motor cables						*		
Check belt tension			*		*			
"V BELTS": Replace the belts and check drive pulleys, replace if worn out								*

- 1) Daily
 2) Weekly / Every 50 h
 3) Every 500 h
 4) Every 1.500 h

- 5) Once a year
 6) Every 6.000 h (6 years MAX)
 7) Every 9.000 h (6 years MAX)
 8) Every 4.500 h (4 years MAX)

** Stop the compressor before checking the oil level. Wait until the oil is separated from the air, about 10 min.

- **SERVICE KIT**

TIMINGS	KIT NUMBERS	KIT DESCRIPTION
1.500 hours	CK2302-1-KA	FILTERS SERVICE KIT
6.000 hours	CK6300-1-KA	OIL SEPARATOR BODY SERVICE KIT
6.000 hours	CC1045817	HOSES SERVICE KIT
9.000 hours	CC1046311	SEAL AIR-END SCA7L

25 OIL RECOMMENDATION FOR COMP AIR SCREW INDUSTRIAL COMPRESSORS

25.1 Recommended lubricant

CompAir compressors have been tested and authorized to be used only with CompAir 4000 lubricants. These lubricants are formulated according to the highest quality standards and are factory authorized, tested and approved for use in rotary screw compressors. The lubricants are available from your authorized CompAir compressor distributor.

25.2 General guidelines for oil change intervals

If final compression temperatures of more than 90 °C occur continually, the oil change intervals given in section 24 (maintenance schedule) are halved.

The oil change intervals should be calculated more accurately in accordance with the actual operating conditions by analyzing the oil.



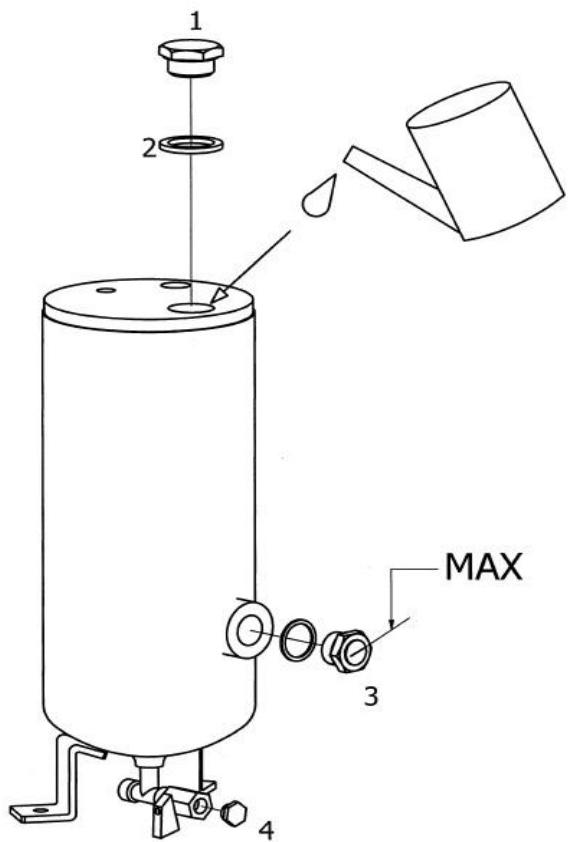
Specific CompAir lubricants are recommended for use in this equipment. Other lubricants may cause :

- shorter life span of oil filters, oil separators and oil
- varnishing and blockage of oil circuit
- higher oil consumption
- excessive carryover and compressor damage



Do not mix different types of oil.

Please Note! If a wrong oil type has been used or the oil circuit is varnished contact CompAir specialists for oil circuit cleaning instructions.



- 1) OIL FILLING PLUG
- 2) GASKET
- 3) OIL LEVEL GAUGE
- 4) WATER DRAIN / OIL DISCHARGING TAP

OIL TANK CAPACITY = Kg 2

26 BELT TENSIONING L 02-03-04-05



The belts tension is guaranteed by the horizontal sliding of the air-end/pulley bracket (fig.1 n°3) after having loosened the screws (fig.1 n°4). The correct tensioning is operated by adjusting the position of this bracket with the regulation screw (fig.1 n°1). In order to check the correct belt tension value, apply a F Force=30 N with a dynamometer, positioned in the middle of the belts (see fig.2), if the tension is correct the measure of the camber is $f = 5 \pm 1$ mm.

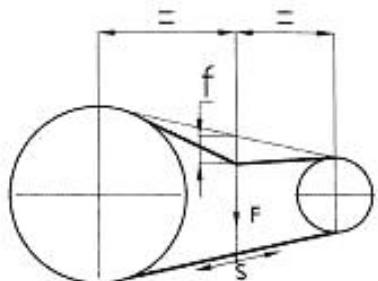
If $f > 7$ mm the tension is too low and the regulation screws must be screwed then the measure of f should be done again to verify if the correct value is reached.

If $f < 3$ mm the tension is too high and the regulation screws must be unscrewed then the measure of f should be done again to verify if the correct value is reached.

NOTE 1: Once the belt has been replaced and the belt tensioned following the procedures just described, the compressor should run for 20-30 min. Check the tension by measuring the "f" value, should this not be within the standard range tension, the belt should be tensioned again.

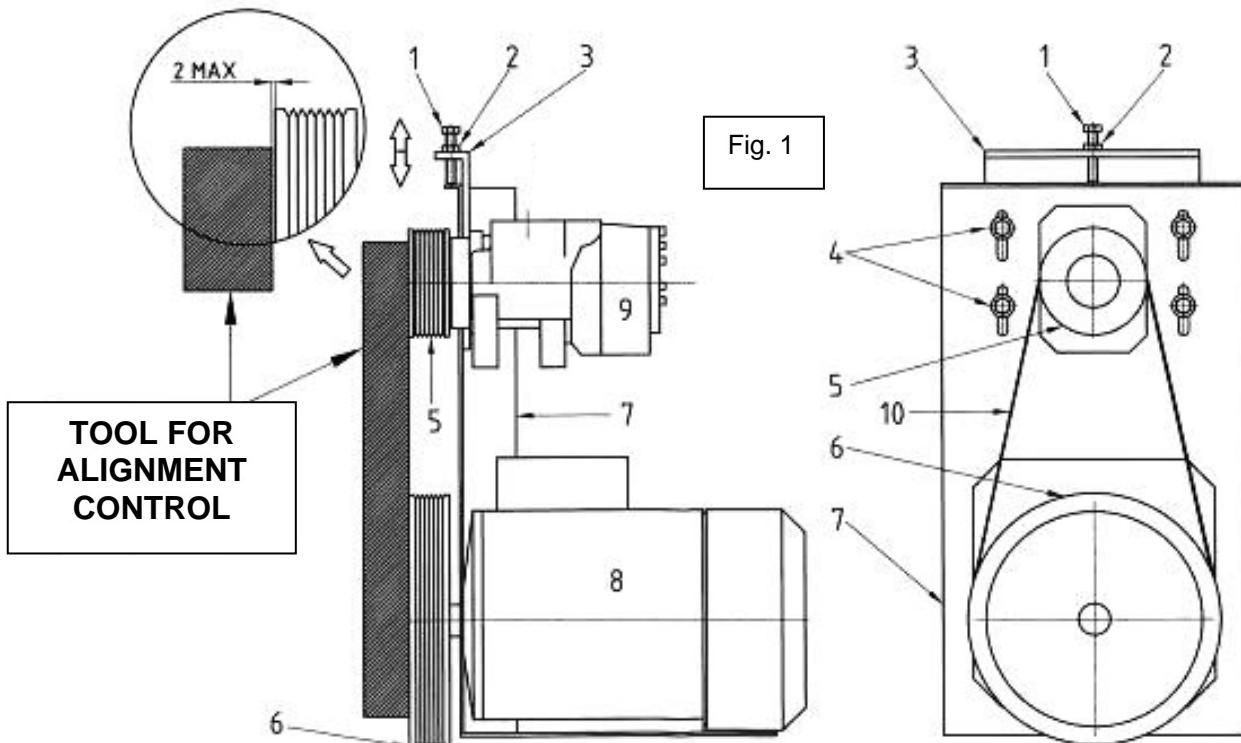
NOTE 2: Check the perfect alignment of the pulleys and if necessary correct it to set the misalignment to 2 mm for XPA belts, 1 mm for poly-V belts (fig.1).

Fig. 2

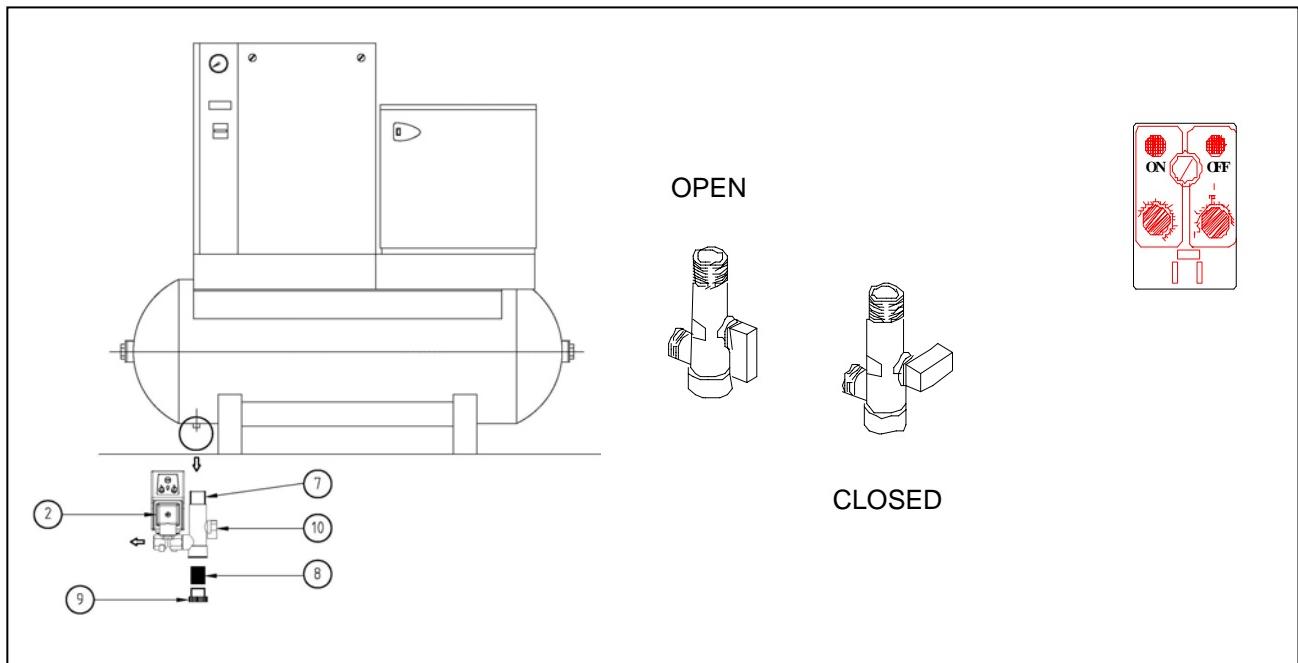


- 1 - TENSIONING SCREW
- 2 - BLOCKING NUT
- 3 - SLIDING PLATE
- 4 - SLIDING PLATE SCREW
- 5 - AIR-END PULLEY
- 6 - MOTOR PULLEY
- 7 - AIR-END SUPPORT
- 8 - ELECTRIC MOTOR
- 9 - AIR-END
- 10 - BELT

Fig. 1



27 MAINTENANCE OF THE AUTOMATIC CONDENSATION DRAIN (OPTIONAL)



Clean after the first 10 working hrs. and then every 500 hrs.

Clean the tap filter pos. 8 following the instructions given below:

- a) disconnect power and disconnect the connection at pos. 2.
- b) close the tap positioned before the drainer pos.10.
- c) unscrew the filter container pos.9 clean the filter carefully pos.8 and remount.

28 TROUBLESHOOTING



NOTE:

- a) All operations must be carried out exclusively by suitably trained technical personnel or by a service centre !!!
- b) before attempting any operation take all the due safety precautions as stated in the "MAINTENANCE" chapter.

Problem	Possible cause and repair
THE COMPRESSOR FAILS TO START	No power supply - check fuses and voltage - check that the protection devices of the voltage supply (safety switch, fault current protection or fuses) are suitable to be used as protection of the frequency converter. Contact the sales advisor.
	Compressor stopped due to overheating - oil-mixing valve or sensor faulty - recirculation of hot cooling air - cooling air volume insufficient - ambient temperature too high - cooler clogged - wrong oil type or oil level too low - oil separator clogged - oil filter blocked
	Electrical fault - check the main switch - check the motor wiring and the frequency wiring converter as well as the tightness of the cable connectors.
	Over-loaded motor - check that the maximum pressure is not exceeding - check the inlet temperature and flow of the cooling air - check the oil level - check the pressure drop of the separator
	Compressor stopped due to too high pressure - check that the shut-off valve between compressor and compressed air system is open - aftercooler is frozen - pressure sensor faulty - line filters clogged
	Doesn't start, although the "Start" button has been pressed - wait (network pressure exceeds the adjusted pressure)
LOW AIR DELIVERY	Air filter clogged - replace the air filter
	Oil separator clogged - replace the oil separator
	Intake valve faulty - repair or replace

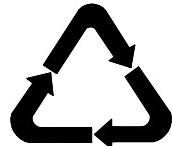
Problem	Possible cause and repair	
LOW AIR DELIVERY	Discharge valve or condensate drainage is faulty	- clean or replace
	Leaks in the compressed-air system	- check and repair the leaks
	Broken coupling	- replace the coupling
	Pressure limits incorrectly set	- set correctly
	Ambient temperature too high	- make cooling air circulation sufficient - ensure that the intake air is from the coolest possible place
	Aftercooler frozen	- prevent the flow of cold cooling air to the compressor
	Pressure relief valve open	- close the valve
COMPRESSOR OVERHEATS	Clogged cooler	- clean the cooler
	Ambient temperature too high	- check cooling air circulation
	Intake valve faulty	- repair or replace
	Oil level too low	- add oil
	Wrong oil type	- see oil recommendation
	Oil filter clogged	- replace the oil filter
	Faulty discharge temperature transducer	- replace
	Cooling air canalization too small or pressure drop too high	- check the dimensioning and pressure drop of the canalization and repair
	Clogged oil separator	- replace the oil separator
OIL CONSUMPTION TOO HIGH	Clogged oil return line	- clean the oil return line
	Faulty oil separator	- replace the oil separator
	Clogged oil separator	- replace the oil separator
	Wrong oil type	- see oil recommendation
	Discharge temperature too high	- find out and eliminate the cause
	Shaft seal leaking	- replace the shaft seal
	Oil level too high	- lower the oil level
INTAKE VALVE LEAKS OIL AFTER EMERGENCY STOP	Intake valve seal is leaking	- replace the intake valve seal
COMPRESSOR STOPS TOO OFTEN	Volume of compressed-air system too small	- observe the min.pipe size, correct
	Blockage in network	- search the blockage, repair

Please Note! See also the error messages listed in the controller user's manual (for specific version)

29 DISPOSAL

IMPORTANT INFORMATION:

More than 90% of the components of this compressor are manufactured with recyclable material.



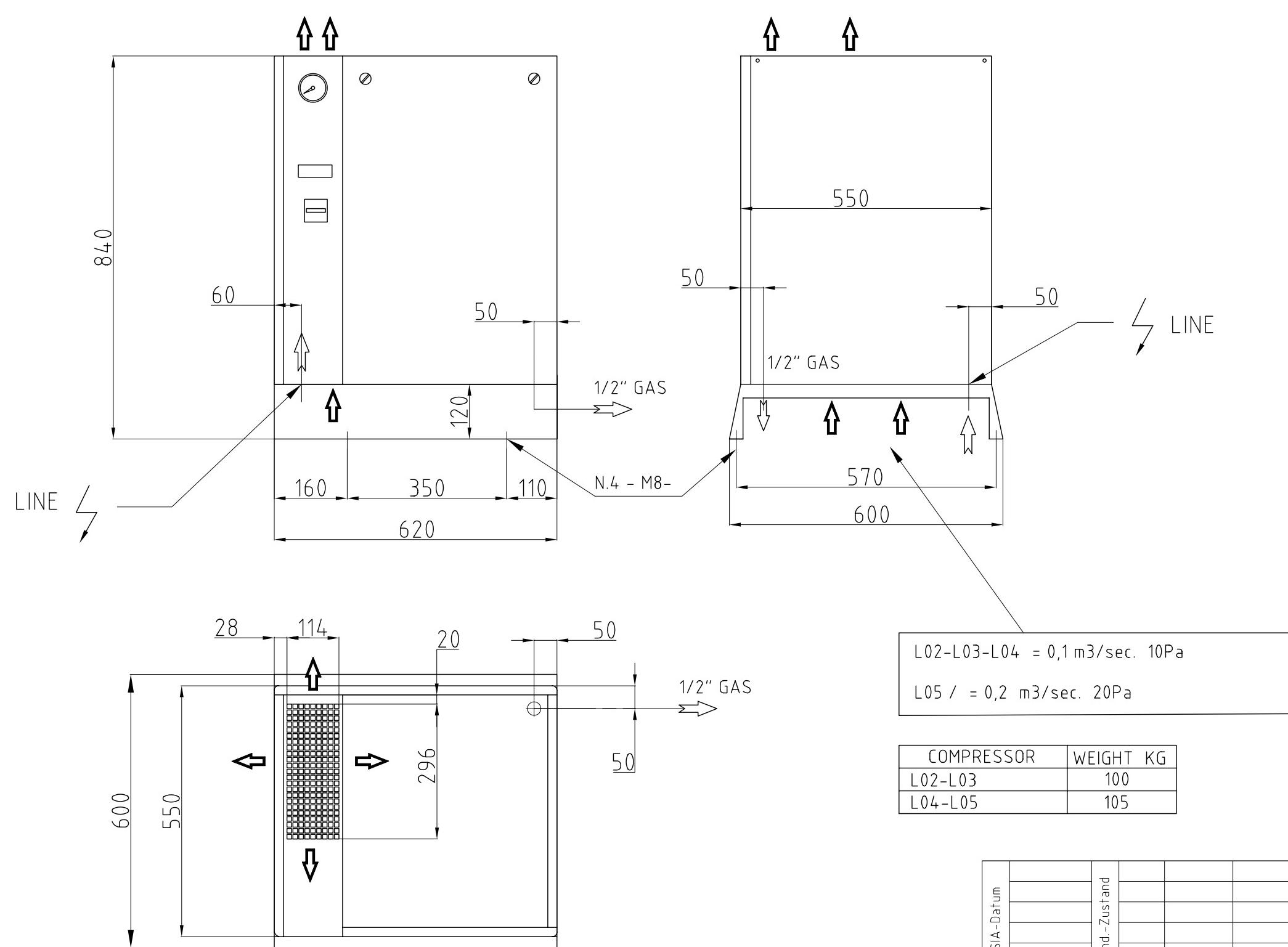
In the event that compressor is withdrawn from service and destined to be dismantled, the following materials must be disposed of as follows:

- **lubricating oil:** to be collected and taken to authorized re-cycling centers ;
- **rubber hosing, electrical cable and plastic parts:** to be collected separately from the other materials ;
- **filters:** to be disposed as "special refuse" ;
- **metal components (motor, air end, frame etc.):** recycle in authorized centers.

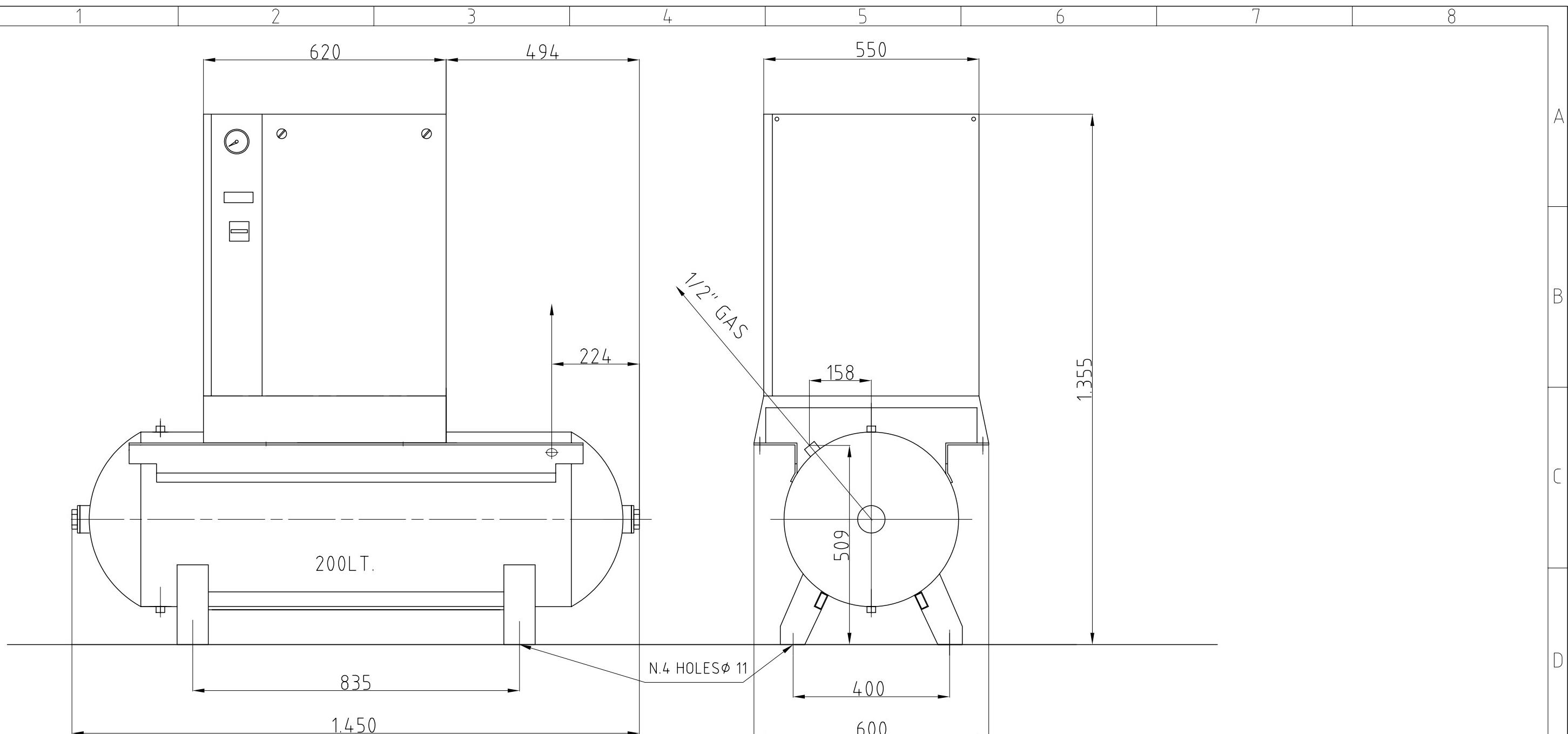


**KEEP THIS HANDBOOK SAFE FOR
FUTURE REFERENCE**

THIS MANUAL IS SUBJECT TO REVISION AND MODIFICATION

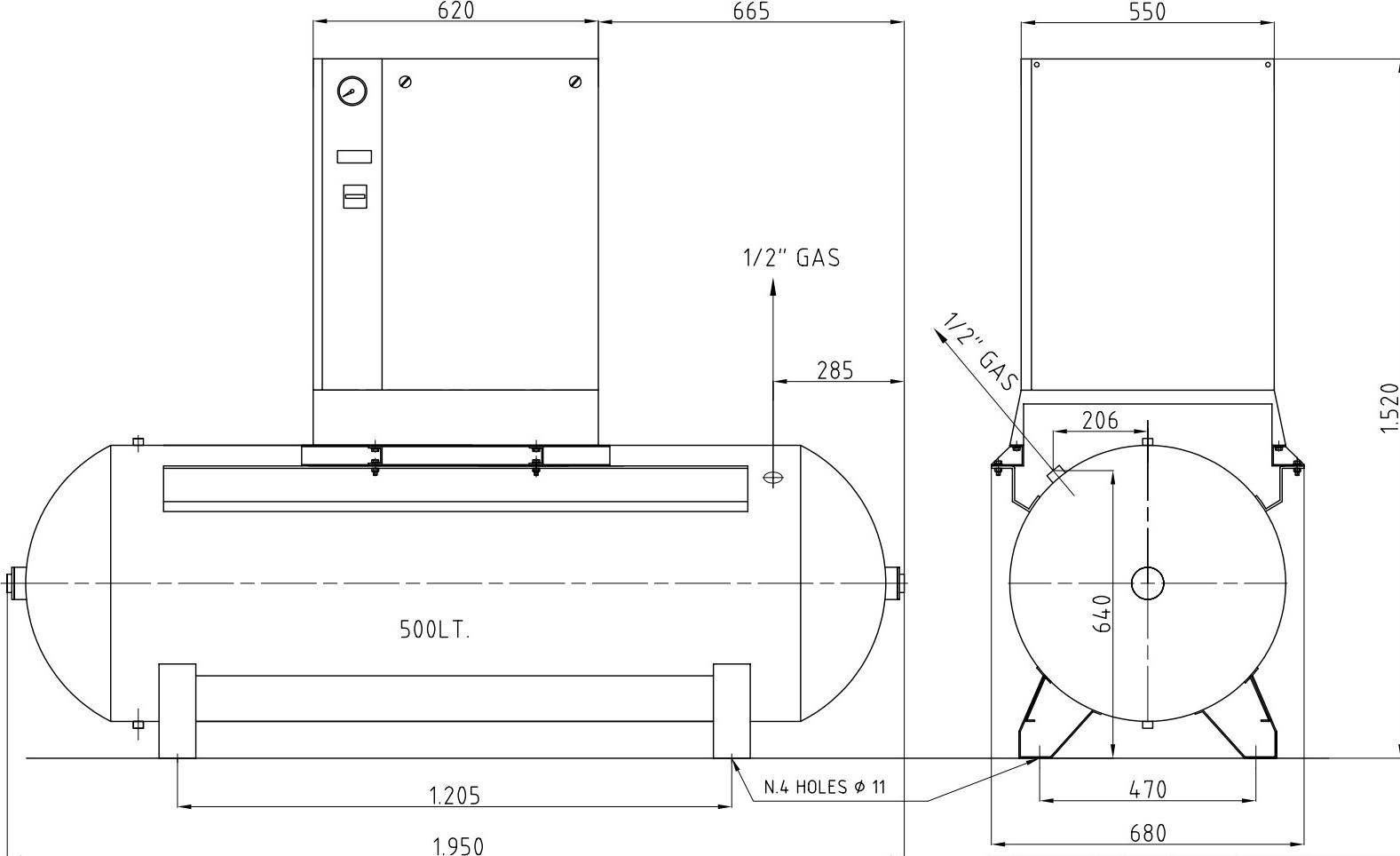


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Tolerierung DIN 7167 Allgemeintoleranzen ISO 2768-mH		Rauhtiefe Rz Reihe 2 DIN 3141		Maßstab	1:10		Gewicht				
				Rohteil-Nr.			Auftr.-Nr.				
				Modell-Nr.			Werkstoff				
	Datum	Name		Benennung							
Bearb.	06.06.07	M.Bellegotti		Aufstellplan / General Arrangement Description L02 - L03 - L04 - L05							
Gepr.											
Norm											
Abt.		Copyright reserved									
Schutzvermerk nach DIN 34 beachten				Klass.- Nr.				UA	Spr	Codestelle	
 CompAir Drucklufttechnik GmbH				Material-Nr. 2012180				SK	AI	Format	Blatt / Blätter
Entstanden aus:				Ersatz für:				Ersetzt durch:			



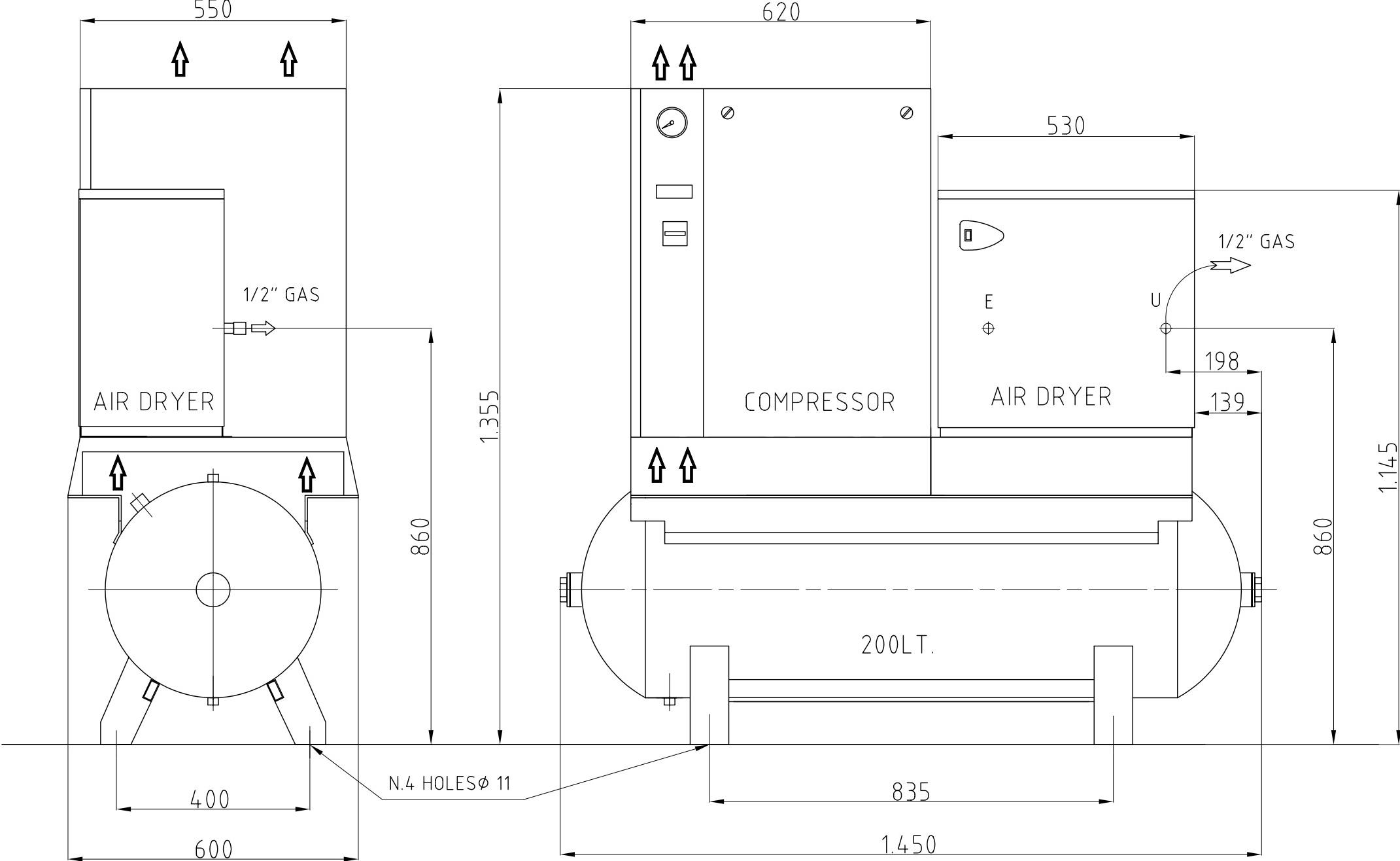
COMPRESSOR	WEIGHT KG
L02-kW 2,2	165
L03-kW 3	165
L04-kW 4	170
L05-kW 5,5	170

1 2 3 4 5 6 7 8



COMPRESSOR	WEIGHT KG
L04-kW 4	255
L05-kW 5,5	255

SIA-Datum	Aend.-Zustand	00	Datum	Name	AM-Nr.
Tolerierung DIN 7167 Allgemeintoleranzen ISO 2768-mH	Rauhtiefe Rz Reihe 2 DIN 3141				Maßstab 1:10 Gewicht
					Rohfteil-Nr.
					Auftr.-Nr.
					Modell-Nr.
					Werkstoff
Benennung					
Aufstellplan / General Arrangement					
Description L04 - L05 (500LT.)					
Schutzvermerk nach DIN 34 beachten			Klass.- Nr.	UA	Spr
					Codestelle
CompAir Drucklufttechnik GmbH			Material-Nr.	SK	AI
			2012181		
					Format Blatt / Blätter
					A3 1 / 1
Entstanden aus:			Ersatz für:	Ersetzt durch:	



COMPRESSOR	WEIGHT KG
L02	212
L03	212
L04	213
L05	217

Reviser/Date	Reviser/State	00	Date	Drawn	Description of revision
Tolerance DIN 7167 General Tolerance ISO 2768-mH		Surface Roughness Rz line 2 DIN 3141		Scale 1:10 Weight	
				Unmachined part no.	Order no.
				Modell-no.	Material
Datum		Name		Part/Document/Description	
Drawn	14.07.07	M. Bellegotti	Aufstellplan / General Arrangement		
Checked			Description		
Norm			L02 - L03 - L04 - L05		
Dep.		Copyright reserved			
Attention to protection mark DIN 34				Class.- No.	Code
				Material-no.	Format Sheet / Sheets
2012193				A3	1 / 1
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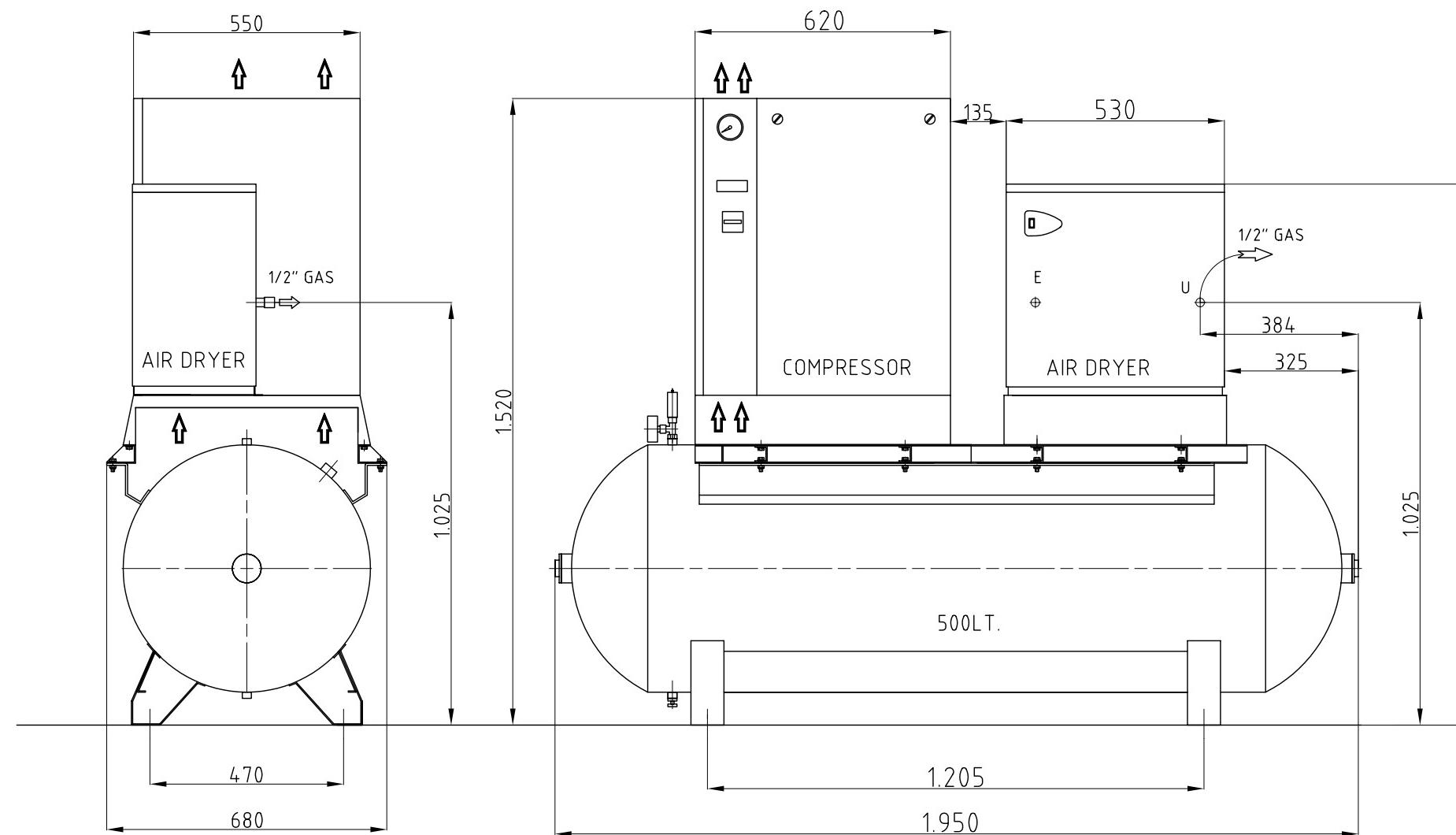
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F

F



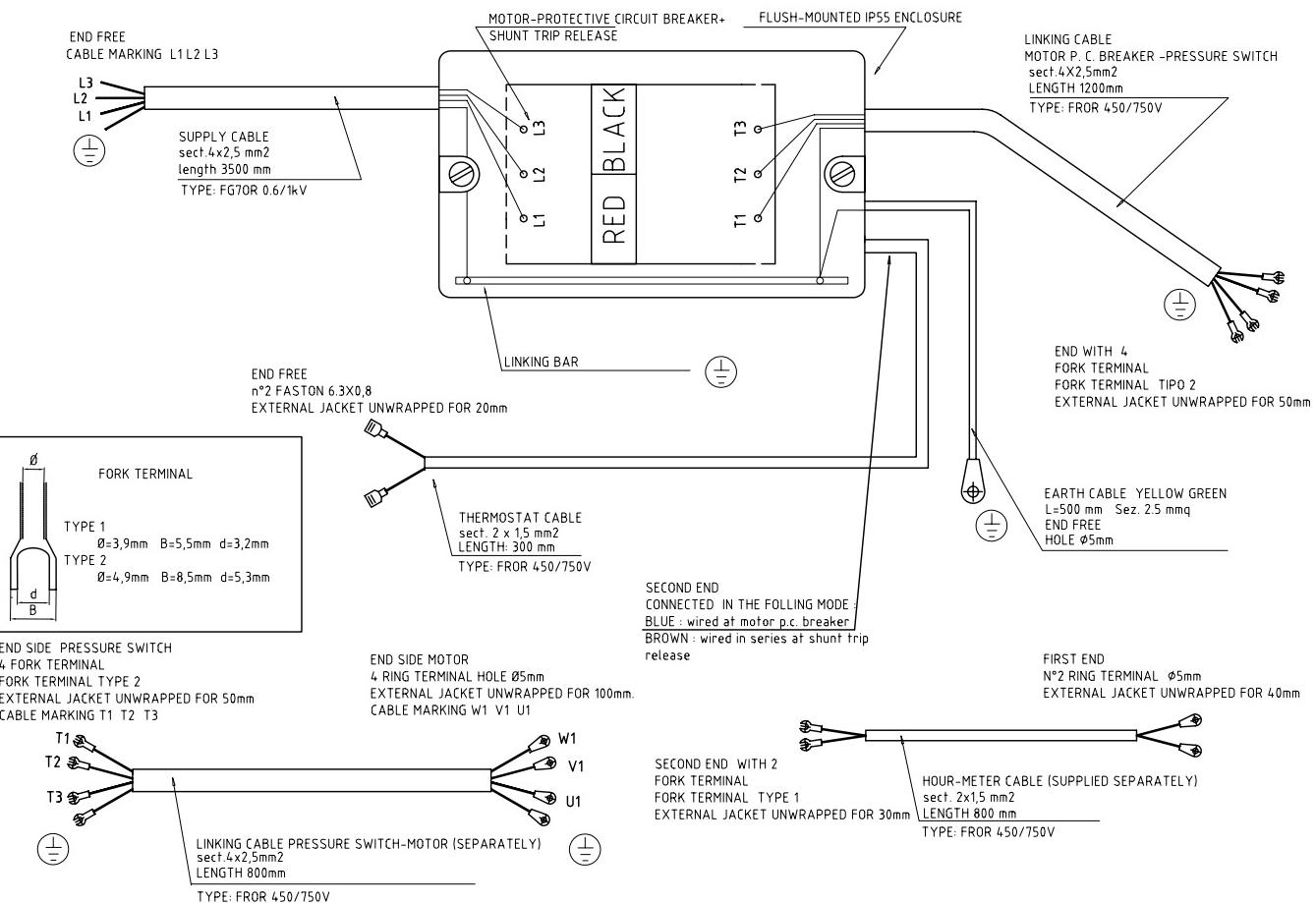
COMPRESSOR	WEIGHT KG
L04-kW 4	290
L05-kW 5,5	295

SIA-Datum	Aend.-Zustand	00	Datum	Name	AM-Nr.
Tolerierung DIN 7167 Allgemeintoleranzen ISO 2768-mH	Rauhtiefe Rz Reihe 2 DIN 3141				Maßstab 1:10 Gewicht
Bearb.	Datum				Rohteil-Nr. Auftr.-Nr.
Gepr.					Modell-Nr. Werkstoff
Norm					
Abt.					
Benennung Aufstellplan / General Arrangement					
Description L04 - L05 AirStation 500lt.					
Schutzvermerk nach DIN 34 beachten					
CompAir Drucklufttechnik GmbH			Material-Nr. 2012192	SK Al Format A2	Blatt / Blätter 1 / 1
Entstanden aus:			Ersatz für:	Ersetzt durch:	

1 2 3 4 5

1 2 3 4 5 6 7 8

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B

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D

SIA-Datum	Aend.-Zustand	00	Datum	Name	AM-Nr.
					Maßstab 1:5 Gewicht
					Rohteil-Nr. Auftr.-Nr.
					Modell-Nr. Werkstoff

Bearb.	23.07.07	M.Malnati	
Gepr.	23.07.07	F.Guarnaccia	
Norm			
Abt.		Copyright reserved	

Schutzvermerk nach DIN 34 beachten

Klass.- Nr.	UA	Spr	Codestelle
Material-Nr.	SK	AI	Format Blatt / Blätter
2012147			A3 1 / 1

CompAir
Drucklufttechnik GmbH

Entstanden aus:

Ersatz für:

Ersetzt durch:

SALVAMOTORE		BOBINA SGANCIO 400V	CUSTODIA INCASSO
CC1036044	KA 2-3-4 L02-3 2.2/3/4kW	CC1035843 MBS25-100 6.3-10A	CC1035840 AM25-52 CC1035842 ITM25
CC1036045	KA 5 5.5kW	CC1035844 MBS25-160 10-16A	CC1035840 AM25-52 CC1035842 ITM25

1

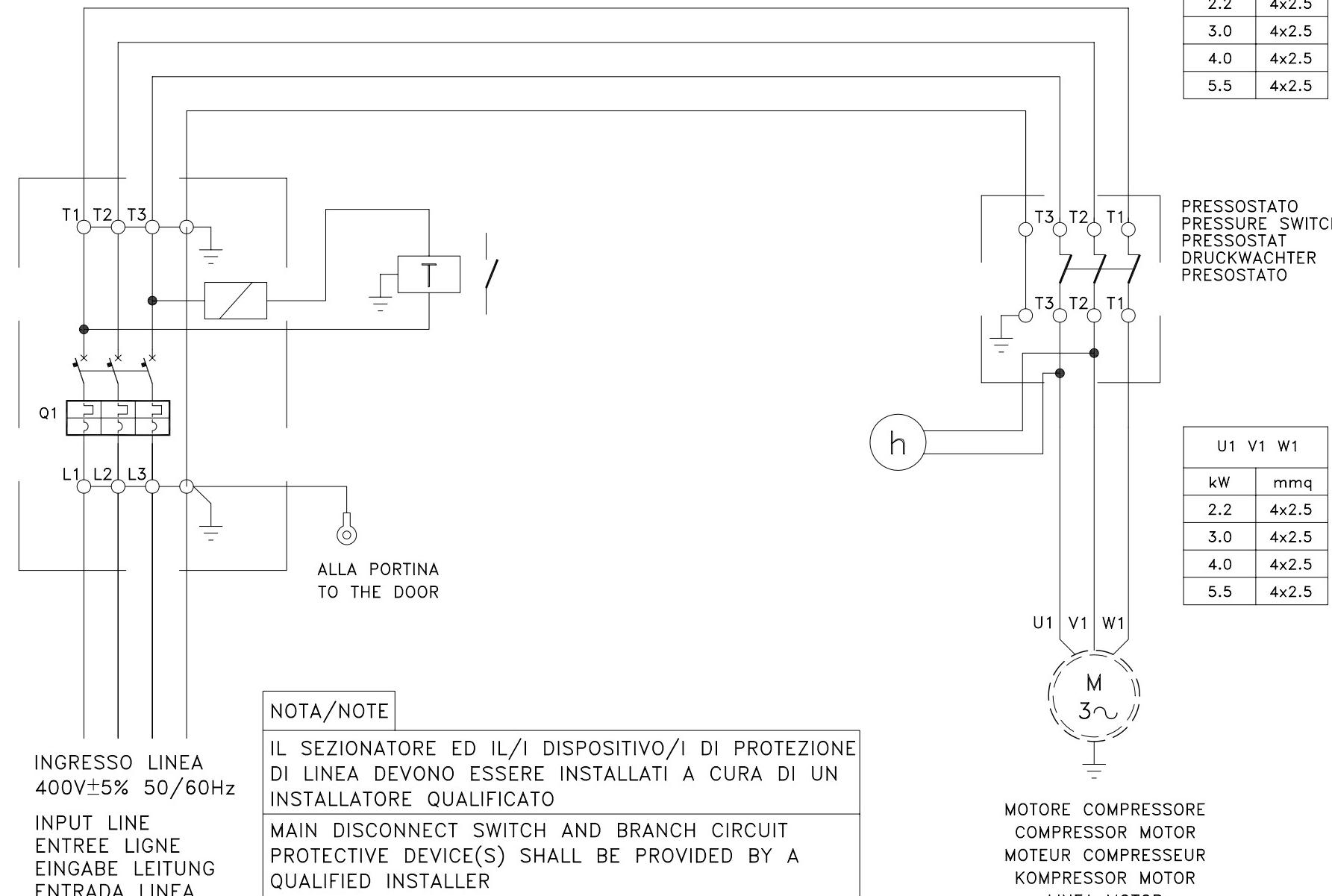
2

3

4

1 2 3 4 5 6 7 8

<input type="checkbox"/>	BOBINA DI SGANCIO / SHUNT TRIP RELEASE	400V
<input checked="" type="checkbox"/>	TERMOSTATO / THERMOSTAT	
<input checked="" type="checkbox"/>	CONTAORE / HOURMETER	400V



COMPRESSORE / COMPRESSOR
TIPO/TYPE: 400V/50-60Hz
KW: 2.2-3.0-4.0-5.5

SIA-Datum		Aend.-Zustand							
	00	Datum	Name	AM-Nr.					
Tolerierung DIN 716 Rauhtiefe Rz Allgemeintoleranzenreihe 2 DIN 3141 ISO 2768-mH				Maßstab		Gewicht			
				Rohteil-Nr.		Auftr.-Nr.			
				Modell-Nr.		Werkstoff			
	Datum	Name		Benennung					
Bearb.	24.07.07	SD		Schaltplan / Electrical Diagram					
Gepr.				Description					
Norm				L02 / L03 / L04 / L05					
Abt.	Copyright reserved								
Schutzvermerk nach DIN 34 beachten				Klass.- Nr.		UA	Spr	Codestelle	
 CompAir Drucklufttechnik GmbH				Material-Nr.	SK	AI	Format	Blatt/Blätter	
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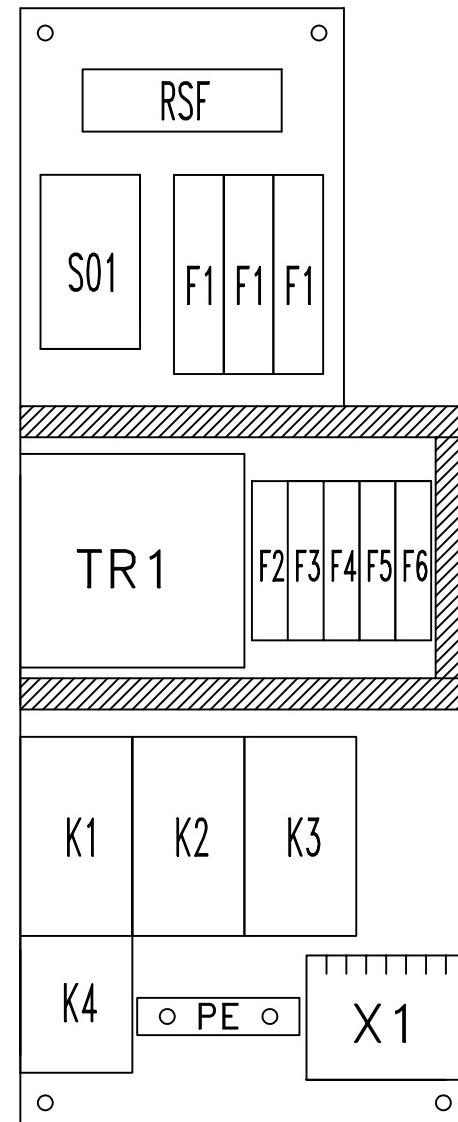
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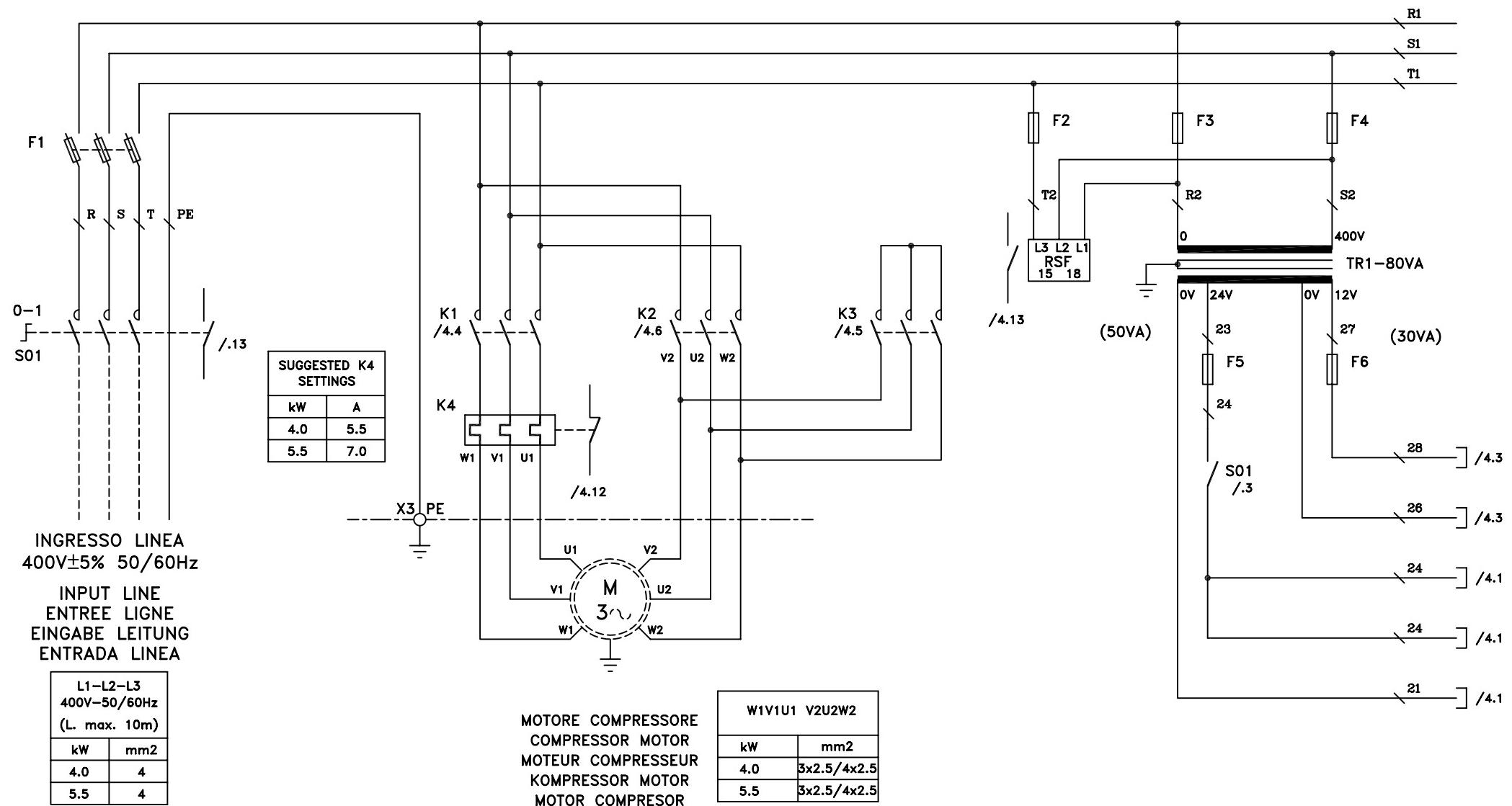
E.COMPRESSOR CONTROL PANEL

TABLEAU DE CONTROLE POUR E.COMPRESSEUR

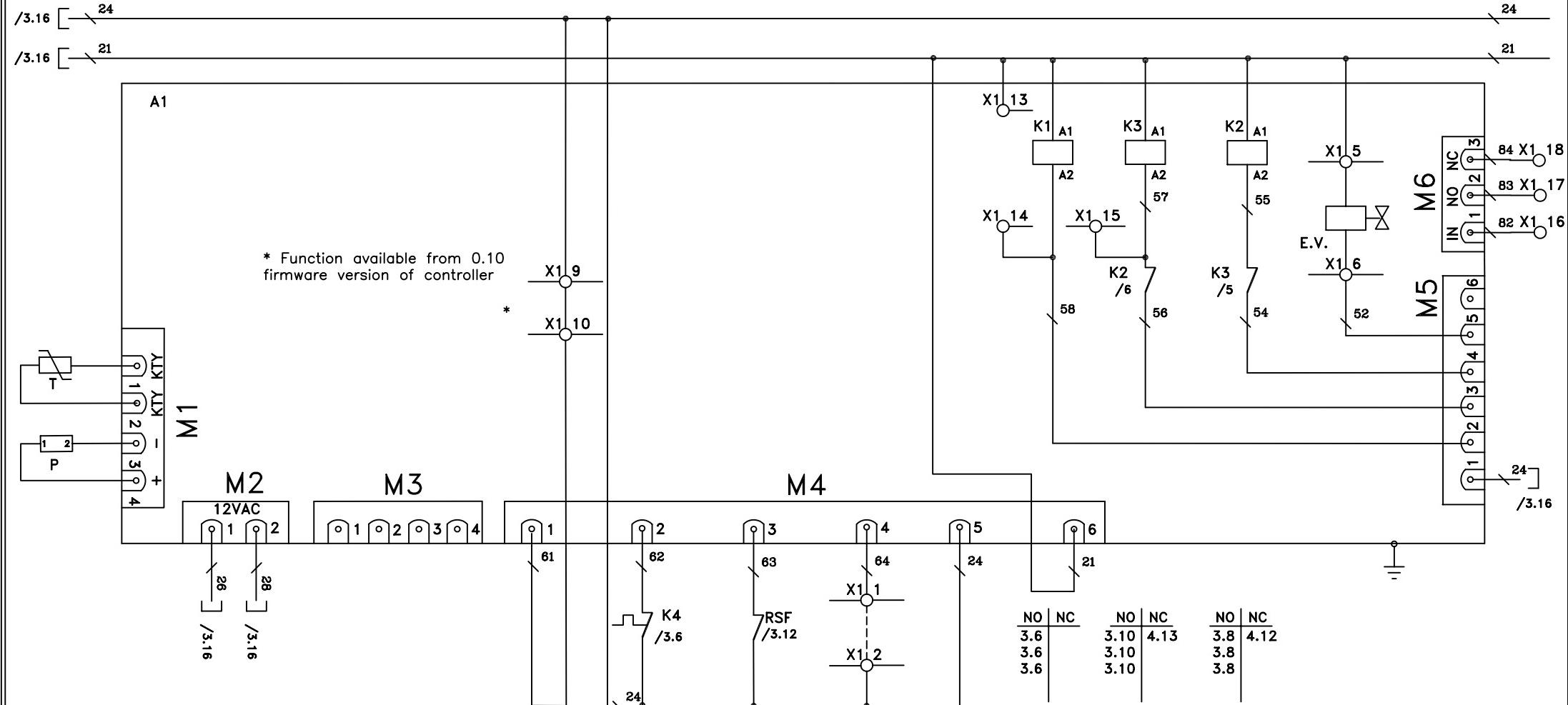
PANEEL KONTROLLE E.KOMPRESSOR

TABLERO DE CONTROLE ELECTROCOMPRESOR

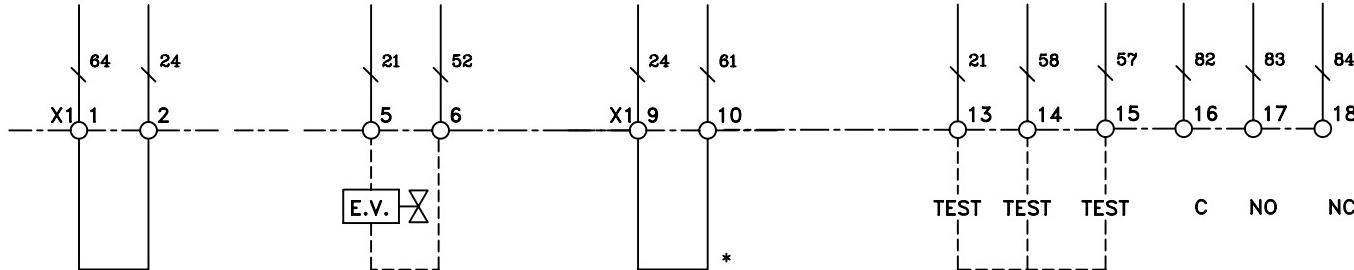




1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SONDA TEMP. PRESS.					COLLEGAMENTO TANDEM	CONTATTO RELE' TERMICO	RELE' SEQUENZA FASI	AVVIAMENTO/ ARRESTO ESTERNO		RELE' LINEA	RELE' STELLA	RELE' TRIANGolo	ELETROVALV. SCARICO		RELE' ALLARME
TEMP. PRESS. SENSOR					CONNECTION TANDEM	OVERLOAD CONTACT	PHASES SEQUENCE RELAY	EXTERNAL START/STOP		LINE CONTACTOR	STAR CONTACTOR	DELTA CONTACTOR	DESCHARGE SOLENOID VALV.		ALARM RELAY
SONDE TEMP. PRESS.					CONNEXION TANDEM	CONTACT SURCHARGE	RELAYS INVERSION PHASE	DEMAR./ARRET EXTERNE		CONTACTEUR LIGNE	CONTACTEUR ETOILE	CONTACTEUR TRIANGLE	ELECTROVALV. DECHARGE		RELAYS ALARME
SONDE TEMP. DRUCK					SHALTUNG TANDEM	KONTAKT UBERLASTET	UMSCHALT- RELAIS	ANLASSEN/ ANHALTEN EXTERNE		LINEN- FERN SCHALTER	STERN- FERN SCHALTER	DREIECK- FERN SCHALTER	ABLAß- ELEKTROVENTIL		RELAY WARNING
SENSOR TEMP. PRES.					BORNERA TANDEM	CONTACT SOBRECARGA	RELE' SECUENCIA FASE	ARRANQUE/ PARADA ESTERNO		CONTACTOR LINEA	CONTACTOR ESTRELLA	CONTACTOR TRIANGULO	ELECTROVALV. DE DESCARGA		RELAY ALARMA



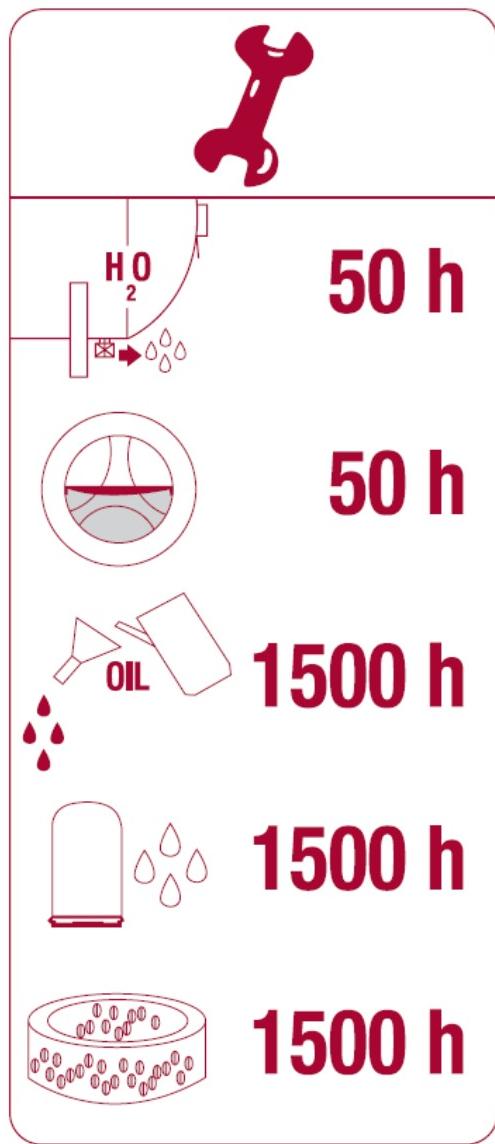
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	START/STOP REMOTO		ELETTROVALV. SCARICO		COLLEGAMENTO TANDEM				RELE' ALLARME						
	REMOTE START/STOP		DESCARGUE SOLENOID VALVE		CONNECTION TANDEM				ALARM RELAY						
	DEMAR./ARRET EXTERNE		ELECTROVALV. DECHARGE		CONNEXION TANDEM				RELAI ALARME						
	ANLASSEN/ ANHALTEN EXTERNE		ABLASS— ELEKTROVENTIL		SHALTUNG TANDEM				RELAY WARNUNG						
	ARRANQUE/ PARADA EXTERNO		ELECTROVALV. DE DESCARGA		BORNERA TANDEM				RELAY ALARMAR						



* Function available from 0.10 firmware version of controller

REF.	POS.	MODEL	DENOMINAZIONE	NAME	DESIGNATION	BENENNUNG	FABRICANTE	SIZE	MANUFACTURER	P/N	400V 50/60Hz
										kW	kW
										4.0	5.5
S01	3\1	OT40F3	SEZIONATORE BLOCCO PORTA	MAIN DISCONNECT SWITCH	INTERRUPEUR GENERAL	HAUPSCHALTER	INTERRUPTOR	3P 40A	ABB	CC1051902	1 1
S01	3\1	OHYS2AJ	MANIGLIA	HANDLE	POIGNÉE	HANDGRIFF	MANIJA		ABB	CC1051905	1 1
S01	3\1	OXS6x150	ALBERO	SHAFT	ARBRE	ANTRIEB	EJE		ABB	CC1051901	1 1
S01	3\1	OA1G10	CONTATTO AUSILIARIO	AUXILIARY CONTACT	CONTACT AUXILIAIRE	HIFSKONTAKT	CONTACT	1NO	ABB	89579209	1 1
K1	3\6	LC1D09B7C	CONTATTORE	CONTACTOR	CONTACTEUR	FERN SCHALTER	CONTACTOR	3P+1NC+1NO 24Vac	SCHNEIDER	CC1065024	1 1
K2	3\8	LC1D09B7C	CONTATTORE	CONTACTOR	CONTACTEUR	FERN SCHALTER	CONTACTOR	3P+1NC +1NO 24Vac	SCHNEIDER	CC1065024	1 1
K3	3\10	LC1D09B7C	CONTATTORE	CONTACTOR	CONTACTEUR	FERN SCHALTER	CONTACTOR	3P+1NC+1NO 24Vac	SCHNEIDER	CC1065024	1 1
K4	3\6	LRD12C	TERMICA	THERMAL RELAY	RELAIS THERMIQUE	THERMISCHES REL.	INTER. SOBRECARGA	3P 5,5-8A	SCHNEIDER	CC1065033	1
K4	3\6	LRD14C	TERMICA	THERMAL RELAY	RELAIS THERMIQUE	THERMISCHES REL.	INTER. SOBRECARGA	3P 7-10A	SCHNEIDER	CC1065035	1
F1	3\1	RT29-32X/3P	PORTAFUSIBILE	FUSE HOLDER	PORTE FUSIBLE	SICHERUNGSHALTER	LLEVAFUSIBLE	3P (10,3x38)	CHNT	TBD	1 1
F1	3\1	RT29-32/20A	FUSIBILE	FUSE	FUSIBLE	SICHERUNG	FUSIBLE	20A aM (10,3x38)	CHNT	401065	3 3
F2	3\11	UK5-HESI	PORTAFUSIBILE	FUSE HOLDER	PORTE FUSIBLE	SICHERUNGSHALTER	LLEVAFUSIBLE	1P (5x30)	PHOENIX	TBD	1 1
F2	3\11	172530	FUSIBILE	FUSE	FUSIBLE	SICHERUNG	FUSIBLE	2A (5x30)	SIBA	CC1069197	1 1
F3-F4	3\13-14	UK5-HESI	PORTAFUSIBILE	FUSE HOLDER	PORTE FUSIBLE	SICHERUNGSHALTER	LLEVAFUSIBLE	1P (5x30)	PHOENIX	TBD	2 2
F3-F4	3\13-14	172530	FUSIBILE	FUSE	FUSIBLE	SICHERUNG	FUSIBLE	2A (5x30)	SIBA	CC1069197	2 2
F5-F6	3\13-14	UK5-HESI	PORTAFUSIBILE	FUSE HOLDER	PORTE FUSIBLE	SICHERUNGSHALTER	LLEVAFUSIBLE	1P (5x20)	PHOENIX	TBD	2 2
F5	3\13	S506-10	FUSIBILE	FUSE	FUSIBLE	SICHERUNG	FUSIBLE	10A (5x20)	BUSSMANN	TBD	1 1
F6	3\14	S506-2	FUSIBILE	FUSE	FUSIBLE	SICHERUNG	FUSIBLE	2A (5x20)	BUSSMANN	TBD	1 1
TR1	3\14	TR 80 VA	TRASFORMATORE	TRASFORMER	TRASFORMATEUR	TRANSFORMATOR	TRAFO	Vin:0-230-400V Vout:0-12V(30VA) / 0-24V (50VA)	JINGDA	CC1070151	1 1
X1	5	DK4Q/35	MORSETTO	TERMINAL BOARD	BORNIERA	KLEMMENBRETT	BORNERA	4mm2	WEIDMULLER	TBD	9 9
RSF	3\12	RD6	RELAY SEQ, FASI	PHASES MONIT. REL.	RELAIS	RELAIS	RELAIS SUPERVISION	200-500Vac	ANT	CC1065055	1 1
A1	4	AIRBASIC2	CENTRALINA	CONTROLLER	CONTROLLER	CONTROLLER	CENTRALITA ELECTR.	12Vac	GD	GD	1 1

 CompAir Drucklufttechnik GmbH	COMPRESSORE/COMPRESSOR: TIPO/TYPE: Wye/Delta – AirBASIC2 TENSIONE/VOLTAGE: 400V–50/60Hz POTENZA/POWER: 4.0–5.5 kW	TITOLO Lista componenti TITLE Components list						REV.	DATA	FIRMA
		IMPIANTO	FIRMA	ORD.	COMM.	DISEGNO N. DRAWING N.	FOGLIO N. SHEET N.	0	12-11-10	UA
		LOCAZIONE	FIN.	DEST.				KA0405A2B400	6/6	



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